>>**Entry Name: Lithium hydride (LiH),** 8Cl

CAS Registry Number: 7580-67-8
Related CAS Registry Numbers(s): 19095-57-9

LiH

Molecular Formula: HLi
Molecular Weight: 7.949
Accurate Mass: 8.023828
Percentage Composition: H 12.68%; Li 87.32%

Source/Synthesis: Prepd. by reaction of H_2 with Li at 500-700° or by thermal dec. of $LiAlH_4$ at 130°
Use/Importance: Commercially available; can be activated for use as reducing agent for ketones, etc.
Physical Description: Moisture sensitive white cubic cryst. Reacts with H_2O to form LiOH and H_2, dissoc. above Mp to form Li metal and H_2
Melting Point: Mp 688.7 dec.°
Other Data: ΔH_f° –90.6 kJ mol^{-1}; ΔG_f° –68.4 kJ mol^{-1}; S° 20.0 J K^{-1} mol^{-1}
Hazard & Toxicity: Flammable

Aldrich: 20104-9
Fluka: 62510

>>**Derivative:** Deuterio compd.
Synonym(s): Lithium deuteride. Lithium hydride (LiD), 8Cl. Deuterated lithium hydride (98% at. % D)

CAS Registry Number: 13587-16-1

Molecular Formula: DLi
Molecular Weight: 8.955
Source/Synthesis: Obt. by methods analogous to LiH
Use/Importance: Commercially available
Physical Description: White moisture sensitive cryst.
Melting Point: Mp 680°
Solubility: Reacts with $H_2O \rightarrow LiOH + H_2/D_2(g)$
Other Data: Dissoc. > Mp to Li + D_2
Hazard & Toxicity: Flammable
Sigma: L4259

References:

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